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ABSTRACT

Data derived from the Southern Youth Study (a randomly stratified sample of 250 black and 409 white males from Southern rural counties with lower than average annual incomes) were utilized to analyze veteran status as a determinant of occupational and educational attainment via the interaction effects between race, veteran status, and residential background. The respondents were young adults who had been interviewed as sophomores in 1966, as seniors in 1968, and again as adults in 1972. The control variables employed were: age (mean age of 21 years); lack of physical handicaps; father's educational level; occupational status of family breadwinner; number of siblings; and education completed. Contrary to expectations generated by Fisher, et.al.'s 1975 findings, no interaction emerged between veteran status and residential background for either occupational or educational attainment, but some interaction effects were found between veteran status and race on educational attainment, which necessitated separate regression analysis for both blacks and whites. With the exception of the relationship between military service and educational attainment for whites, the bridging environment hypothesis was not supported nor was the more general societal assumption that military service enhances one's career, for exactly the opposite effect was observed. (JC)

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THE EFFECTS OF MILITARY SERVICE ON EARLY OCCUPATIONAL AND EDUCATIONAL ATTAINMENT

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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by

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B.S.Ed., The University of Georgia, 1973

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CHAPTER I

INTRODUCTION

Understanding the socioeconomic attainment process has been increased by the inclusion of variables intervening between the characteristics of an individual's family of origin and his eventual socioeconomic status (Blau and Duncan, 1967; Duncan, et al., 1972; Sewell and Hauser, 1975). One class of these variables, defined as career contingencies, has directed attention to "decisions taken or circumstances encountered in the course of the life cycle that may have significant bearing on occupational outcomes" (Duncan, et al., 1972:13). For example, the effects of such contingencies as education, migration, age at first job, disruption of marriage, childspacing, etc. have been shown to significantly affect one's subsequent socioeconomic attainment (Blau and Duncan, 1967; Duncan, et al., 1972).[1]

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[1]It is, of course, important to note that the conceptualization of career contingencies implies no advantage or detriment. A given career contingency may be encountered by some and not by others as well as encountered at

Military service is one such contingency--a "decision taken" for many males, as in the case of enlistment, or a "circumstance encountered" for others, as in the case of conscription. It has been widely assumed since its "revolutionary origins" (Janowitz, 1971:167) to provide opportunities for acquiring the educational, vocational, and psycho-social development necessary to be competitive within the civilian labor market. Indeed, the Armed Forces themselves have actively promoted the assertion that civilian socioeconomic attainment is, at least for veterans, a result of time spent in the military milieu (Katenbrink, 1969; Barnes, 1971). In spite of several recent studies of this assertion (see below), some questions about its accuracy remain unanswered.

This paper will examine some of these questions. Using a six-year panel of Southern nonmetropolitan black and white youth, it will focus on the degree to which veteran status affects the subsequent occupational and educational attainment of these youth. The remainder of

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different points in the life cycle. Further, a particular career contingency will be a decided advantage for some individuals based upon the nature of the family of origin and other intervening variables. The same variable confounded with a different set of background and intervening variables may bring a mobility process to an abrupt halt, or induce a reversal.

this chapter will attempt to identify some key questions about this topic that still remain.

Military Service and Socioeconomic Attainment

Apart from general observations that military service provides opportunities for acquiring a broad range of skills useful in civilian employment, the major theoretical underpinning of the assumption that military service furthers subsequent socioeconomic attainment has been developed by Browning and his colleagues (1973). Using Broom and Smith's (1963) discussion of bridging occupations, they conceptualize the military milieu as a "bridging environment" which spans the gap between the abilities provided by socialization processes in most lower-status environments and the abilities needed to compete successfully in civilian labor environments. Through weakening ties to family, neighborhood and community (which, for persons in lower status environments, could continue to reinforce attitudes and values not conducive to successful participation in civilian labor environments), through acquiring further education and specific job training, and through acquiring experience in interacting with and manipulating large scale organizations, the individual obtains "new skills and abilities, which,

after military service, could help him in his civilian career" (Browning, et al., 1973:76). As is obvious, however, this argument applies only to persons whose previous environmental experiences might require "bridging" --generally speaking persons in minority and lower socio-economic status categories. For other persons, military service may depress subsequent socioeconomic attainment due to interruption of formal education and thus later start in the civilian labor market, less seniority, and lack of specific on-the-job training required for some occupations.

At least two questions have been generated by this hypothesis. First, what are the consequences of military service for the educational and occupational dimensions of socioeconomic attainment? As will be seen, almost all of the information on military service and socioeconomic attainment are for the income dimension only. The other question gets directly to the core of the "bridging environment" hypothesis: what are the socioeconomic consequences of military service for persons from environments which most require "bridging" i.e., persons from minority segments of the population? While some research on blacks and Mexican-Americans has been directed toward this question (see below), firm conclusions have yet to emerge.

Effects of Military Service on Education and Occupational Attainment

Most of the evidence on the consequences of military service for socioeconomic attainment concerns differences in the earnings of veterans and nonveterans, perhaps because the initial empirical examinations of this topic were by economists. Focusing on income variations between draftees and nonveterans of the same age while the draftees were still in the military, these studies (Oi, 1967; Hansen and Weisbrod, 1967; Miller and Tollison, 1971) demonstrate that military service results in a disproportionate "tax" or compulsory forfeiture of time for draftees, although they suggest that this "tax" will probably be heavier for some individuals than for others (based upon both the nature of their occupation and their potential earnings).[2] Comparing veterans who have completed military service to nonveterans, Mason (1970:40-50), Cutright (1974a), and Fisher, et al. (1975) show either no association or a negative one between military service and subsequent earnings. Browning, et al. (1973) is an exception, with their finding of positive

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[2]As indicated above, those affected are compelled to forfeit several years and spend many more recovering from the absence from the civilian labor market. In this sense, then, their government has levied a tax upon them that is not required of others; i.e., disproportionate.

associations among minority group veterans (although they did report negative associations among whites).

There are, however, two other major dimensions of socioeconomic attainment: occupational level and educational attainment. Both have been greatly neglected in investigations of how military service and socioeconomic attainment are related. Only the studies by Mason (1970) and Fisher and her colleagues (1975) make any effort to explore the educational attainment dimension. Using data from a mailed sample survey conducted by the U.S. Bureau of the Census, Mason (1970:34-39) found that while veterans had less education than draftable nonveterans at the time of entry into service, data on post-service educational attainment indicated this gap had closed. But much of this increment in veteran educational attainment occurred <u>within</u> the military service (Mason, 1970:126) as opposed to being a <u>subsequent</u> result of military service. Fisher and her colleagues (1975:147) present data on subsequent educational attainment beyond high school in their study of a seven-year panel (1957-1964) of Wisconsin high school youth, but only as a precursor to understanding the post-high school earnings of this panel. They found that veterans were overrepresented in the lower educational attainment categories (those receiving no further education, those

completing vocational or technical schools, and those currently enrolled in college) and underrepresented in the higher categories (those who had graduated from college and those who had been or were currently involved in post-graduate work). Thus, while Mason contends that military service does enhance educational attainment, due primarily to education received within the military, Fisher, et al., present data suggesting that at least for educational attainment beyond high school, it does not.

The picture with reference to occupational attainment is clearer, but then contradiction is difficult to come by when there is only one systematic study of a topic. Mason (1970:39-42) reports that veterans do not differ from nonveterans in their average level of occupational status when other confounding influences, especially educational attainment, are controlled.

Thus, knowledge concerning the consequences of military service on the occupational and educational dimensions of socioeconomic attainment is severely limited, primarily because research on these two dimensions has been almost totally ignored in favor of research on the association between military service and the income dimension. Further, because both Mason and the Fisher team focus on whites, neither study speaks of the critical question for the

bridging environment hypothesis: does military service differentially affect the socioeconomic attainment of veterans from minority segments of the population?

Effects of Military Service on Educational and Occupational Attainment of Minority-Group Veterans

Since the only two studies of this topic essentially exclude minority segments of the population from their analyses, it is necessary to rely on examinations of how military service affects income levels of minority-group veterans for suggestions about its consequences for these veterans' subsequent educational and occupational attainment. Browning and his colleagues (1973:80-82), in an analysis of earnings reported by Southwestern veterans and nonveterans in the 1960 Census 1/100 public use sample, show that both Mexican-American and black veterans have higher incomes than their nonveteran counterparts, while Anglo veterans experience income decreases when compared to Anglo nonveterans. These findings were interpreted as supporting the bridging environment hypothesis.

Cutright (1974a) disagrees. Examining a one percent Social Security Administration sample of persons born between 1927-1934, he found little positive effect of military service on the post-service earnings of blacks and

a decidedly negative effect on the post-service earnings of whites. He further questions Browning et al.'s findings on six specific methodological counts ranging from sample selection to inadequate use of control variables (Cutright, 1974:316).[3]

However, Cutright's study also has problems. His comparison of black veteran and nonveteran earnings is restricted to those persons in the 0-9 AFQT (Armed Forces Qualifying Test) range, due to small sample sizes among black nonveterans at higher AFQT levels (Cutright, 1974a:325). This procedure eliminates 72 percent of the

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[3]Specifically, these are (1) overcontrol of the data by use of an insensitive classification of occupational status (eight categories), (2) the failure to control for age (since veterans tend to be older than nonveterans within certain age categories, veteran earnings may be largely based upon income increases due to age, seniority, etc.), (3) the statistical method used to adjust income for differences in educational attainment, (4) the exclusion of men with less than five years of education in order to minimize differences in mental ability (the vast majority of mental ability rejects have more than five years of schooling), (5) the lack of differentiation by selective service classification and veteran status, (6) the under-numeration of minority men by Census, and (7) the low reliability of self reported earnings. The sampling procedure in all twenty-four race/occupational categories eliminated between one-third and three-fourths of the sample within categories. Their analysis is seriously biased by the sampling criteria which include only "the elite of low skill workers" (Browning, et al., 1973:82) and eliminates those who are presumably the very individuals the bridging environment may endow with the most decided advantage.

black veterans in his sample from the analysis, those who might be most able to profit from the "bridge" to increased socioeconomic attainment supposedly provided by the military milieu. Thus, it may be that this procedure has inadvertently "stacked the deck" against uncovering significant income differences between black veterans and non-veterans. At the minimum, this study tells us little about the effects of military service on post-service earnings of black veterans in higher AFQT ranges.[4]

Given the current state of confusion surrounding the consequences of military service on the earnings of minority group veterans, firm suggestions concerning its effects on their educational and occupational attainment are not available. Hence, if there is severely limited knowledge concerning the general question of how military service affects the neglected dimensions of occupational and educational attainment, knowledge is absolutely lacking with reference to the specific question of whether military service differentially affects these two dimensions of socioeconomic attainment among minority group veterans. The power and pervasiveness of the military in our

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[4]Cutright (1973:table c-4) shows the percentage of blacks in the 0-9 AFQT category decreasing as education increases with less than 25 percent of those blacks with twelve years of education falling within that category.

society, coupled with our ignorance about these important consequences, demands further research on these questions. The next chapter presents a description of the present research designed to address both issues.

CHAPTER II

METHODS

This chapter describes the methods used to pursue information about the occupational and educational effects of military service. It begins with a discussion of the sampling and data collection procedures, which is followed by an account of how variables employed in the analysis were measured. In order to maintain proper sensitivity to possible limitations in the analysis, a consideration of some methodological problems encountered will conclude the chapter.

The Sample and Data Collection

Data on which this analysis is based result from the cooperative efforts of five Southern states participating in USDA Regional Research Projects S-61 ("Development of Human Resource Potentials of Rural Youth in the South"), and S-81 ("Development of Human Resource Potentials or Rural Youth in the South and Their Patterns of Mobility"),

also known collectively as the Southern Youth Study.[5] Counties from Alabama, Georgia, Louisiana, Mississippi, South Carolina and Texas were selected on the basis of three nonrandom criteria: (1) The counties were to be nonmetropolitan (that is, containing no SMSA), (2) they were to be characterized by low socioeconomic status, and (3) they were to have higher than average proportions of blacks. Following these criteria, the majority of the counties selected were more than 70 percent rural and of those selected, all had lower mean annual incomes than the average annual income for the United States in 1960 (Thomas, 1970; Level, 1969). And all but eight counties had higher proportions of blacks than the national percentage in 1960.[6] After selection of counties, high schools were chosen on the basis of either a random or purposive sampling design--the latter being used in instances where a random design would have undernumerated the target population. (For more information as to sampling procedures by state, see White, 1974).

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[5]Louisiana did not participate in 1966 and Mississippi did not participate in 1968.

[6]Specifically, six of these counties consist of the four Alabama counties and two North Georgia counties that were adjacent to Appalachia.

The first wave of data collection occurred during the Spring of 1966. Questionnaires soliciting information on the control variables (see next section), as well as those not relevant to the present study, were administered to all sophomores attending the target schools on the day of administration. Students who were seniors in these high schools two years later (Spring, 1968) constitute the base from which the panel for this study was drawn.

It became apparent during the planning for the third contact in 1972 (four years subsequent to completion of high school) that limitations on time and funds rendered impractical a design that would seek to recontact all respondents interviewed in 1968. Therefore, a stratified random sample of those students who had participated in 1968 was chosen on the following basis: (1) each state was to be responsible for recontacting 250 respondents, and (2) the subsamples were to be stratified 50:50 by race and 60:40 by sex. Although the projected sample size was 1500 respondents, attrition rates within some states were larger than others and accordingly these states were unable to fill their quotas. The final sample N was 1228. Table 1 illustrates selected characteristics of the males in the sample by race. As can be seen, black and white respondents are equally distributed by residential background

Table 1: Sample characteristics of Southern rural men who completed high school in 1972, by race.

	Black (N=250)	White (N=409)
Residence		
City (2,500)	19.9	25.2
Town (< 2,500)	19.5	18.1
Country, nonfarm	27.8	23.7
Farm	32.8	33.0
Father's Education		
No formal education	5.21	0.53
Grades 1-7	29.17	17.82
Completion of eighth grade	15.10	11.44
Some high school	26.56	22.61
Completion of high school	15.10	22.61
Vocational or technical school	2.08	4.52
Some college	2.60	8.24
Completion of college	4.17	12.23
Mean	3.55	4.57
Standard deviation	1.65	1.91
Occupational Status of the Breadwinner (Duncan SEI)		
Mean	20.40	34.74
Standard deviation	17.85	22.57
Number of Siblings in the Family of Origin	(N=146)	(N=259)
Mean	5.23	2.64
Standard deviation	1.97	1.89
Veteran Status	(N=235)	(N=342)
Veterans	34.0	20.8
Nonveterans	66.0	79.2

with approximately 67 percent of each not residing on farms in 1966. (It should be recalled that nonfarm is also non-SMSA). While father's educational and occupational status indicate that both black and white youth came from lower status environments, black respondents score noticeably lower on both indices than whites. Black youth also come from larger families than the white youth in this sample, and participate more in military service. These distributions suggest that father's educational and occupational attainment as well as number of siblings in the family of origin need to be controlled when the differential effects of military service on blacks and whites is examined.

Measurement of Variables

This section will be concerned with the measurement of two types of variables. Discussed first will be the strategies for measuring the primary variables of the analysis--the independent and dependent variables. This will be followed by a description of how the variables used essentially as controls in the analysis are operationalized.[7]

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[7] For specific questionnaire items see Appendix A.

Primary Variables

The two dependent variables are occupational and educational attainment. Occupational attainment is defined as the Duncan (1961) SEI (SocioEconomic Index) score assigned to the occupation held in 1972 by each respondent. The measurement of educational attainment requires more discussion. Because the 1972 interviews took place only four years following completion of high school, it is reasonable to expect many respondents to still be in the educational attainment process. An analysis of the effects of veteran status on education completed would unduly penalize these respondents. For example, those who had not completed their particular post-high school educational program would not show any attainment beyond completion of high school. Thus educational attainment includes not only education completed by education in process. The variable is operationalized in three categories: (1) those who had no education beyond a high school diploma and were not currently enrolled in a post-high school educational program in 1972; (2) those who either had completed a vocational or technical program or were currently enrolled in such a program in 1972; and (3) those who had completed a college degree (either an associate degree at a junior

college or a Bachelor's degree at a four-year institution) or were currently enrolled in such a program in 1972.

Veteran status, the independent variable, is a dichotomy. Respondents who had completed active service in the armed forces by the 1972 data collection period were classified as veterans, while those who had not experienced such service were defined as nonveterans.[8] Those still serving in the armed forces were eliminated from the analysis, since the effects of veteran status on civilian occupational and educational attainment is the topic under investigation.

Control Variables

There are several categories of control variables. Two--race and residential background--are employed as well as independent variables in some of the analyses, but only for the purpose of ascertaining the degree of interaction between them and veteran status. Race is divided into black and white, while residential background contains the categories of farm and nonfarm residence (reported in 1966).

The other six variables are used strictly as control variables. A control for age is necessary due to the

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[8]All men reporting military service reported having held an enlisted rank at the time of discharge.

increments in various status areas as an individual gets older--especially early in the life cycle. An analysis in which either group had a higher mean age would likely bias the results (for example, see Cutright, 1974). In this analysis, the relatively homogeneous nature of the sample controls for age (the mean age of the sample is 21 with a standard deviation of 1). Physical handicaps also pose a problem. As Mason (1970:18) correctly states, "there is little reason to suppose that selective service inducts a simple random sample of the male population in the draftable age group." Individuals must meet minimum requirements of intelligence, physical health, etc. to enter military service. It is thus plausible that veterans are a more fit group on the whole than nonveterans and results indicating benefits from military service could be an artifact of this difference. Therefore, those who responded in 1966 as having a physical handicap were eliminated from the analysis.[9]

The remaining variables--father's education, occupational status of the breadwinner, number of siblings and education completed--are controlled statistically through multiple regression procedures. According to Duncan,

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[9]Any disabilities accrued in the interim between 1966 and the third contact in 1972, however, cannot be ascertained.

Featherman, and Duncan (1972:39) educational attainment depends primarily on the respondent's family background variables, such as breadwinner's education, occupation of the breadwinner, and number of siblings. Occupational attainment also depends on these three family background variables, although Duncan and his colleagues point out that their effects are mostly indirect, via the respondent's level of education.[10] Hence, it is necessary to control for these three family background variables when the effects of military service on attainment are examined, and additionally for current level of education when occupational attainment becomes the dependent variable. Father's education was classified on an eight point scale derived from 1966 responses: no formal education, grade 1-7, completion of eighth grade, some high school, completion of high school, vocational or technical school, some college, and completion of college. Occupational status of the breadwinner is the Duncan SEI score assigned to the breadwinner's occupation in 1966. The number of siblings in the respondent's family or origin was coded as reported in 1966. Education completed (only employed in

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[10]Father's education was used in this analysis because of its superiority in predicting early attainment for males (see Duncan, et al., 1972:178).

the analysis of occupational attainment) has three categories: (1) no education beyond high school, (2) completed vocational or technical school, and (3) completed a college degree program (again either an associate degree at a junior college or a Bachelor's degree at a four-year institution. Respondents still involved in the educational process were omitted from this variable and from the analysis of occupational attainment, since they were not yet in the occupational world.

Some Methodological Problems

Before embarking upon the analysis, several problems associated with it demand attention.

(1) Mode of entry into the service cannot be ascertained. Therefore, a young man entering the service in order to receive otherwise unavailable vocational training or support for subsequent academic pursuits, cannot be differentiated from those who may have enlisted to avoid the draft or those who were forced into service by conscription. If one is willing to consider aspirations as an indicator of motivation, then it is plausible the effects of military service would vary according to mode of and reason for entry into military service (see Sewell and

Hauser, 1975:Chapter 4; see also Duncan, et al., 1972: Chapter 6).

(2) Because our sample is spread across the South, as well as other regions for those who migrated, opportunity structures are likely to be different for men in different areas. Unfortunately, the data at hand are inadequate to cope with this problem. Some comfort may be had, however, on the assumption that differential opportunity structures across and within regions are more likely to evidence bias in the analysis of annual earnings than in one related to occupational attainment (see Cutright, 1974b).

(3) The analysis is also problematic due to the recontact being only four years subsequent to completion of high school. This is still within the beginning of the status attainment process. While it is impossible to predict with our data the ultimate effects of veteran status on attainment in various status areas, it will nonetheless be worthwhile to observe its influence early in the life cycle. This assertion has two foundations. First, armed forces recruiting advertisements assert job status will be enhanced for veterans immediately upon entry into civilian occupational structure. If this is the case, and the bridging environment hypothesis suggests it is at least for minority group men, then veterans should have higher

occupational status than nonveterans. Second, the utilization of service benefits for post-service academic pursuits is likely to take place soon after discharge. An analysis early in the life cycle would be more sensitive to veteran-nonveteran differences in educational attainment.

Finally, there is the question of how to score veterans' claims of "military training" in the educational attainment and education completed variables. Within the armed forces are training facilities for thousands of resident courses and specific occupations (see Clarke and Sloan, 1969), in which one is frequently forced as a condition of his military occupational specialty (see Mason, 1970). "Military training" may refer to such instruction, or it may mean nothing more than the short basic or advanced basic training that most recruits undergo. Unfortunately, the data do not specify which or how much. We are left with two alternatives, neither of which is nonproblematic. Military training can be eliminated from these two education variables. Yet, in doing so we may be eliminating a bona fide educational attainment for some veterans. Or, it can be included within the vocational and technical training category, where it seems to fit best. But this alternative creates another problem. If military training means nothing more than "basic"

training, its obvious connection to veteran status is likely to present a biased picture of the effects of veteran status on educational attainment, or its effects via educational completed on occupational attainment. The reasonable choice becomes one of running each analysis involving either of these education variables twice, including and excluding military training from these variables. Results can then be compared to uncover any differences in findings generated by these two procedures.

CHAPTER III

FINDINGS

Three sections comprise this chapter. To determine how the analyses of the associations between veteran status and the two dimensions of socioeconomic attainment should proceed, the first section will explore possible interaction effects between race, veteran status and residential background with the two dependent variables in question. A research strategy for exploring the effects of veteran status on the two dependent variables in question will be formulated based upon the results. The following two sections will elaborate the results of the chosen research procedure. First, a discussion of veteran status and occupational attainment and second, a discussion of veteran status and educational attainment.

Potential Interaction Effects

Previous research has indicated interaction effects between race, residential background, and veteran status in the determination of socioeconomic attainment. Duncan,

et al. (1972:55) report that race tends to interact with independent variables relevant to an analysis of status attainment, while Fisher and her colleagues (1975:160) have demonstrated interactions between residential background and military service in their study of earnings and occupational choice. As a preliminary step to examining the effects of veteran status on occupational and educational attainment, these interaction possibilities must be investigated using analysis of covariance procedures. Table 2 shows no significant interaction among residential background, and veteran status with reference to the determination of occupational attainment. Only the effects of race, and as expected, the covariates produce any significant difference between mean SEI scores. Further, changes in the procedure for measuring the covariate of education completed with regard to military training (see page 24) do not alter this finding. Thus, although interaction effects between veteran status and residential background on annual earnings were observed by Fisher and her colleagues in their sample of Wisconsin youth, no such effects could be found on occupational attainment among Southern youth.

However, interaction effects between veteran status and race do appear when educational attainment replaces

Table 2: Occupational attainment, residential background, veteran status and race, with adjustment for covariates.[a]

Occupational attainment with military training excluded from education completed

MEANS BEFORE AND AFTER ADJUSTMENT FOR COVARIATES

Race and Residence	Nonveterans N	Nonveterans Mean Before ADJ.	Nonveterans Mean After ADJ.	Nonveterans STND DEV	Veterans N	Veterans Mean Before ADJ.	Veterans Mean After ADJ.	Veterans STND DEV
Black/Farm	45	17.467	17.796	14.818	24	18.500	20.109	17.200
Black/Nonfarm	85	20.482	21.075	15.116	50	15.800	16.763	13.822
White/Farm	66	29.061	27.335	19.947	25	25.760	26.841	13.663
White/Nonfarm	112	33.446	29.590	20.711	36	28.110	28.118	16.292

ANALYSIS OF VARIANCE

Factor	DF	Mean Square	F-Test	Significance
A. Residential Background	1	60.438	0.209	NS[b]
B. Veteran Status	1	78.938	0.273	NS
C. Race	1	5406.938	18.686	.001
AxB	1	307.750	1.064	NS
AxC	1	67.063	0.282	NS
BxC	1	0.063	Very Small	NS
AxBxC	1	169.000	0.584	NS
Covariates	4	1888.375	6.526	.001

Table 2 (continued)

Occupational attainment with military training included in educational attainment

MEANS BEFORE AND AFTER ADJUSTMENT FOR COVARIATES

Race and Residence	Nonveterans N	Nonveterans Mean Before ADJ.	Nonveterans Mean After ADJ.	Nonveterans STND DEV	Veterans N	Veterans Mean Before ADJ.	Veterans Mean After ADJ.	Veterans STND DEV
Black/Farm	45	17.467	18.277	14.818	24	18.500	19.766	17.200
Black/Nonfarm	85	20.482	21.518	18.116	50	15.800	15.863	13.822
White/Farm	66	29.061	27.718	19.947	25	25.760	26.565	13.663
White/Nonfarm	112	32.446	29.955	20.711	36	28.111	27.965	16.292

ANALYSIS OF VARIANCE

Factor	DF	Mean Square	F-Test	Significance
A. Residential Background	1	44.625	0.153	NS
B. Veteran Status	1	272.250	0.935	NS
C. Race	1	5599.688	19.239	.001
AxB	1	339.063	1.165	NS
AxC	1	95.875	0.329	NS
BxC	1	5.500	0.019	NS
AxBxC	1	210.500	0.723	NS
Covariates	4	1703.969	5.584	.001

[a]Covariates are: father's education, occupational status of the breadwinner, number of siblings in the family of origin and education completed.

[b]Significance greater than .250.

occupational attainment as the dependent variable, as can be seen in Table 3. Both analyses--including and excluding military training--reveal this pattern. Again, there is no evidence of interaction between residential background and veteran status.

The discovery of interaction between veteran status and race necessitates separate regression analyses for blacks and whites when examining educational attainment. While such analyses are not necessary for the examination of occupational attainment, they will be presented to facilitate comparisons between the two sets of analyses. In the interest of understanding further the failure to obtain any interaction between residential background and of further specifying the joint effects of veteran status and race, separate regression analyses for each of the combined categories of residential background and race (i.e., black/farm, black/nonfarm, white/farm, white/nonfarm) will also be computed.

Veteran Status and Occupational Attainment

Table 4 presents the regression coefficients in standardized form for the analysis of the effects of veteran status on level of occupational attainment. Column one presents the coefficients computed with military

Table 3: Educational attainment, residential background, veteran status and race, with adjustment for covariates.[2]

Educational attainment with military training excluded

MEANS BEFORE AND AFTER ADJUSTMENT FOR COVARIATES

Race and Residence	Nonveterans N	Nonveterans Mean Before ADJ.	Nonveterans Mean After ADJ.	Nonveterans STND DEV	Veterans N	Veterans Mean Before ADJ.	Veterans Mean After ADJ.	Veterans STND DEV
Black/Farm	49	1.571	1.627	0.816	19	1.368	1.500	0.816
Black/Nonfarm	104	1.702	1.735	0.869	30	1.667	1.705	0.802
White/Farm	85	2.012	1.953	0.919	23	1.261	1.325	0.541
White/Nonfarm	181	2.227	2.030	0.900	34	1.559	1.791	0.705

ANALYSIS OF VARIANCE

Factor	DF	Mean Square	F-Test	Significance
A. Residential Background	1	1.437	2.183	.141
B. Veteran Status	1	8.200	12.458	.001
C. Race	1	0.213	0.324	NS[b]
AxB	1	0.168	0.256	NS
AxC	1	0.022	0.034	NS
BxC	1	4.896	7.438	.007
AxBxC	1	0.000	Very Small	NS
Covariates	3	12.684	19.270	.001

Table 3 (continued)

Educational attainment with military training included

MEANS BEFORE AND AFTER ADJUSTMENT FOR COVARIATES

Race and Residence	Nonveterans N	Nonveterans Mean Before ADJ.	Nonveterans Mean After ADJ.	Nonveterans STND DEV	Veterans N	Veterans Mean Before ADJ.	Veterans Mean After ADJ.	Veterans STND DEV
Black/Farm	49	1.571	1.628	0.816	25	1.520	1.651	0.653
Black/Nonfarm	104	1.702	1.735	0.869	51	1.765	1.807	0.586
White/Farm	85	2.012	1.944	0.919	29	1.414	1.473	0.568
White/Nonfarm	181	2.227	2.035	0.900	41	1.610	1.546	0.628

ANALYSIS OF VARIANCE

Factor	DF	Mean Square	F-Test	Significance
A. Residential Background	1	1.051	1.703	.193
B. Veteran Status	1	4.333	7.024	.009
C. Race	1	0.148	0.241	NS
AxB	1	0.005	0.009	NS
AxC	1	0.057	0.092	NS
BxC	1	6.615	10.722	.002
AxBxC	1	0.025	0.041	NS
Covariates	3	12.303	19.943	.001

[a]Covariates are: father's education, occupational status of the breadwinner and number of siblings in the family of origin.

[b]Significance greater than .500.

Table 4. Veteran status and occupational attainment with family background variables and education completed controlled.[a]

	With Military Training Excluded from Education Completed		With Military Training Included in Educated Completed	
	Standardized Regression Coefficient	Level of Significance	Standardized Regression Coefficient	Level of Significance
Overall Analysis[b]	-.041	NS[e]	-.058	NS
Analysis within Racial Categories[c]				
Blacks	-.078	NS	-.096	NS
Whites	-.021	NS	-.033	NS
Analysis within Residence Categories[d]				
Farm	.039	NS	.012	NS
Nonfarm	-.076	NS	-.088	.10
Analysis within Racial and Residential Categories				
Black/Farm	.068	NS	.059	NS
Black/Nonfarm	-.147	.07	-.171	.04
White/Farm	.003	NS	-.032	NS
White/Nonfarm	-.037	NS	-.041	NS

[a]Family background variables include father's education, occupational status of the breadwinner and the number of siblings in the family of origin.

[b]Race and residence also entered into the regression equation.

[c]Residence also entered into the regression equation.

[d]Race also entered into the regression equation.

[e]Significance greater than .10.

training excluded from education completed, while the coefficients in column three are computed with military training included. Since the results of these two procedures are highly similar, the following discussion will treat them as a single set.

Within the overall analysis, military service is seen as exercising a negative, although not significant, effect on the level of occupational attainment. This same negative effect is apparent among blacks as well as whites, with veteran status creating slightly greater disadvantages in occupational attainment for them than for whites. In view of the bridging environment hypothesis, it should be noted that the coefficients for blacks are in the opposite direction of what was expected. Coefficients for the two residential categories suggest that the pervasive but slight negative effect of military service on occupational attainment may have some connection with respondents' residential background. This effect is more marked among those in the nonfarm residential category, which contains two-thirds of the sample, as opposed to the farm category in which military service generated a slight increment in occupational attainment. Analysis within the four combinations of racial and residential categories provides a more specific picture: it is among black respondents only that

residential background matters. For blacks with nonfarm residential backgrounds veteran status has a more marked negative consequence on occupational attainment than for any other category in the table, attaining statistical significance around the .05 level. For blacks with farm residential backgrounds, however, there is the opposite tendency: military service provides the largest (but still slight and statistically insignificant) increment in occupational attainment of any category in the table. In none of the categories in Table 4, then, does military service provide a statistically significant increment in occupational attainment four years after high school. In fact, most of its consequences are negative, especially for blacks with nonfarm residential backgrounds, for whom the only statistically significant finding is produced. Since this category is one for which the bridging environment hypothesis predicts positive effects, and in view of the lack of association within all other categories of the table, this hypothesis is not supported as concerns occupational attainment.

Veteran Status and Educational Attainment

Like the analysis of occupational attainment, two sets of standardized regression coefficients are presented for

the association between veteran status and educational attainment: one with military training excluded from educational attainment (column one) and one with it included (column three). As would be expected (since the educational variable is now the dependent variable), there is a little more variation between the results obtained by these two procedures here than with occupational attainment. Enough similarity still exists between the coefficients in Table 5 to warrant treating them as a single set, however.

Unlike occupational attainment, the overall analysis reveals that military service has a significant inverse effect upon educational attainment (i.e., that beyond high school). Regression analyses within racial categories make it plain that this finding is due primarily to the negative effects of military service on whites' educational attainment. While blacks show a slight negative or slight positive association between military service and educational attainment, depending on whether military training is included or excluded from the analysis, whites display a stronger and statistically significant inverse relation under both conditions. These results support contentions of the bridging environment's position concerning whites, but again offer no support to its position concerning blacks.

Table 5: Veteran status and educational attainment beyond high school, with family background variables controlled.[a]

	With Military Training Excluded from Educational Attainment		With Military Training Included in Educational Attainment	
	Standardized Regression Coefficient	Level of Significance	Standardized Regression Coefficient	Level of Significance
Overall Analysis[b]	-.151	.001	-.119	.003
Within Racial Categories[c]				
Blacks	-.051	NS[e]	.021	NS
Whites	-.242	.001	-.226	.001
Within Residence Categories[d]				
Farm	-.206	.004	-.149	.03
Nonfarm	-.114	.02	-.100	.04
Within Racial and Residential Categories				
Black/Farm	-.100	NS	-.016	NS
Black/Nonfarm	-.018	NS	.038	NS
White/Farm	-.291	.002	-.243	.006
White/Nonfarm	-.222	.001	-.219	.001

[a]Family background variables include father's education, occupational status of the breadwinner, and the number of siblings in the family of origin.

[b]Race and residence also entered into the regression equation.

[c]Residence also entered into the regression equation.

[d]Race also entered into the regression equation.

[e]Significance greater than .10.

Analysis within the two residential categories, or within the four combinations of racial and residential categories, discloses little additional information. The significant negative association among respondents with both farm and nonfarm backgrounds seems a function of whites being the majority in both categories. This suspicion is confirmed by the regression analyses of the racial and residential categories combined. Among both farm and nonfarm whites military service results in a statistically significant decrement in educational attainment, while among blacks no significant differences emerge between the residential categories. Changes in residential background, then, have little effect on the association between veteran status and educational attainment for blacks or for whites.

In sum, military service has a significant inverse effect on educational attainment for white males, regardless of residential background. This is as predicted by the bridging environment hypothesis. But the major contention of this hypothesis--that minority group veterans will profit most from this environment--is once more not supported. No significant positive relationship between veteran status and further education beyond high school emerges for any category of blacks. In fact, again the

slight associations that do emerge are largely in the opposite direction.

In conclusion, neither the analysis of veteran status and occupational attainment nor of veteran status and educational attainment lend support to the key contention of the bridging environment hypothesis--that the military milieu provides marked advantages for subsequent socio-economic attainment for minority group veterans. As for the more general assertion which contends a period of military service will act as a positively enhancing career contingency, with which this paper began, the ubiquity of negative associations between military service and both educational and occupational attainment virtually renders it "inoperative."

CHAPTER IV

SUMMARY AND DISCUSSION

Chapter IV will begin with a summary of the findings and follow with a discussion of their sociological implications with respect to both previous and future research.

Summary of the Findings

The analysis of veteran status as a determinant of occupational and educational attainment necessarily began with a test for interaction effects between race, veteran status, and residential background. Contrary to expectations generated by Fisher, et al.'s (1975) findings, no interaction emerged between veteran status and residential background on either of these two dimensions of socioeconomic attainment. Interaction effects were observed, however, between veteran status and race upon educational attainment, which necessitated separate regression analyses for both blacks and whites. To further specify any associations between veteran status and these two dimensions which might be uncovered, separate regression analyses were

also run for individuals from farm and nonfarm backgrounds and finally for each of the combined categories of residential background and race.

Regression analyses of occupational attainment on veteran status showed no statistically significant increment in occupational attainment four years after completion of high school--indeed, the effects observed were in the majority of cases negative. Furthermore, for blacks with nonfarm backgrounds (the very group the bridging environment is hypothesized to act most favorably upon), these negative effects were statistically significant, even when reported military training was included as education completed beyond high school. In fact, those who reported military training as education completed show slightly greater negative effects than those who did not.

With respect to the analysis of veteran status and educational attainment, the same lack of benefit was observed. White veterans had significantly lower educational attainment than nonveterans, while a slight but insignificant negative relationship appeared for blacks. As would be expected, the inclusion of military training mitigated the effects a little, but in no case did it alter this relationship significantly. Further examination of this association within the combined racial and residential

background groupings revealed only one positive but very small relationship (among nonfarm blacks, the very group which showed the only statistically significant negative relationship between military service and occupational attainment), and this was when reported military training was included in educational attainment. With the exception of the relationship between military service and educational attainment for whites, the bridging environment hypothesis was not supported for these Southern youth. Neither was the more general societal assumption of career enhancement for those who serve, for exactly the opposite effect was observed.

Discussion

How are these findings explained? The lack of interaction effects between veteran status and residential background upon either occupational or educational attainment which Fisher and her colleagues (1975) found upon earnings could be a consequence of regional variations between samples of the two studies--their's was of Wisconsin youth while this study has examined Southern youth. However, more probably it is a function of the different indicators of socioeconomic attainment. A measure of income is to a greater extent a more sensitive measure with respect to

fluctuation than a measure of either occupational or educational attainment. To the extent that this latter interpretation is correct, it underscores the necessity for exploring the effects of military service on all dimensions of socioeconomic attainment as opposed to the current strategy of focusing almost exclusively upon income.

The major question, however, concerns the lack of success of military service as a bridging environment. Closer scrutiny of this hypothesis reveals several problems, each of which could account for its failure to be confirmed by data. First, we know of no reason why the supposed bridging environment provided by military service for lower class youth should operate selectively on the basis of ethnic status. It is well known to sociologists today that it is unwise to generalize toward the attitudes, expectations, aspirations, etc. of an entire ethnic group without specifying the particular social classes of the group toward which the generalizations are aimed. Yet, the approach taken by Browning and his colleagues (1973) uses just such a strategy. They seem to assume that all whites undergo middle class socialization and thus that lower class whites have at their disposal the means to acquire the same skills and system awareness as do middle or upper class whites. While whites do carry a definite advantage

in the civilian labor market due to the continued existence of racial discrimination, there seems to be no well defined theoretical basis for assuming all whites, regardless of their class of origin, learn a set of fundamental skills that are facilitative to success in their chosen endeavor. Therefore, the hypothesis would be more compelling if it emphasized the effects from military service for lower status youth instead of minority youth.

Second, the implication that minority status young men leave an environment that is largely racist and enter one that is not is questionable. The past several years have noted numerous outbreaks of race-related violence that render the image of the armed forces as a "color-blind" institution somewhat dubious. Furthermore, Schaeffer (1975) notes the high rate of men who go AWOL each year and also indicates that the majority of these men are non-draftees. While she does not present percentages by race, her data do indicate that at least for some groups of men, the reality of life in the military does not approximate the image created by local recruiters and military advertising.

Finally, and most importantly, the potential benefits of this "bridging environment" from the acquisition of education and further job training may not be benefits at

all. If one gives military advertising close scrutiny, it becomes quickly apparent that alongside the persuasive lure to sophisticated job training is the stipulation that one must qualify for the training in question. Thus, to receive sophisticated job training, one must have the necessary skills to, first, grasp and comprehend the training, and then, upon completion, to perform the job in question. Obviously, the lower one's cognitive skills, the more limited the range of vocational training. It is questionable, then, as to whether such limited job training received by lower status youth will be an advantage upon discharge, if that training could have been acquired simply in an on-the-job situation. For those who do qualify for sophisticated job training, the military requires a longer commitment of time in order to receive a fair return on their investment. Although the training may have transferable civilian counterparts, the longer period away from the civilian labor market is, according to Miller and Tollison (1970), the fundamental factor behind the negative impact of military service.

Thus, the armed forces' periodic self-professed role as a welfare institution may be called into question. As an example, let us consider Project 100,000. Project 100,000, as the Department of Defenses's contribution to

Lyndon Johnson's war on poverty, was aimed at alleviating the problems of lower status youth by lowering entrance standards and allowing them entry into the military.[11] There, for all the reasons stated by the bridging environment hypothesis (Browning, et al., 1973), they could acquire the necessary skills for success in the civilian labor market. Close examination of the Comptroller General's Report to the Congress (1969) reveals, however, that the remedial programs designed to equip men with the skills necessary to benefit from training only brought their reading levels up to the fifth grade. Then the bulk of these men were channeled into the infantry. Barnes (1971) reports further data along these lines. Comparing the "new standards" men to a random control sample of regular army men, he discovered that 40 percent of the "new standards" men were black as compared to 12 percent of the control sample, 49 percent were from the South as compared to 28 percent of the control sample, and 50 percent of the "new standards" men went to Vietnam (no percentage given for the control sample). Barnes (1971:46) concludes, "One does not have to be a statistical wizard to recognize that

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[11] Whereas, before Project 100,000 the minimum acceptable AFQT score was 31 out of 100, under the new program lower status youth scoring as low as 10 were inducted.

Project 100,000 served as a vehicle for channeling poor, mostly Southern and Negro youths to the front lines in Indochina."

These findings are consistent with the results of this thesis. Both make it clear that the assumption of status enhancement from military service--especially for minority group members--is unwarranted.

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APPENDIX A

The following questions were used to elicit the information analyzed in the study. Items from the interview schedule are arranged in the same order as the presentation of variables in Chapter II.

Primary Variables

Occupational attainment (1972)

What job or occupation did you hold on May 1, 1972?
Coding information Duncan SEI

Educational attainment

What is the highest degree or education program you have completed (circle only one)? (1972)

Coding information:

Some high school	= 01
High school diploma	= 02
Military training program	= 03
Vocational-technical program	= 04
Business or clerical education program	= 05
Practical nursing program	= 06
Associate degree--junior college	= 07
Bachelor degree--4 year college or university	= 08
Professional degree	= 09
Master's degre	= 10
Ph.D. degree	= 11

Are you presently attending school? (1972)

Coding information:
Yes = 1
No = 1

If yes, what kind of course are you taking? (1972)

Completing high school	= 1
Attending trade, business, commercial, apprenticeship or some other vocational or technical school program	= 2
Attending a junior college (2 years)	= 3
Attending a four-year college or university	= 4
Working on a master's degree (such as law, medicine, dentistry, Vet. medicine or pharmacy)	= 5
Working on a Ph.D. degree	= 6

Veteran Status (1972)

Have you served in the military?

Coding information

No	= 1
Yes, was in service	= 2
Yes, presently in service	= 3

Race (1966)

What is your race? (Circle one number.)

1	2	3	4
American Indian	Oriental	Negro	Caucasian (white)

Residential background (1966)

Where do you live? (Circle one number.)

1 City (over 2,500)

2 Town or village (under 2,500)

3 In the country, but not on a farm

4 On a farm

Age (1966)

How old are you today? (Circle the number above your age.)

1	2	3	4	5	6	7	8
13 or less	14	15	16	17	18	19	20 or more

Age reported in 1966 was adjusted in 1972.

Physical handicaps

Do you have any physical handicaps? (Circle one number.)

1 Yes 2 No

Father's education

What was the highest school grade completed by your father and mother? (Circle one number for father and one number for mother.)

Father		Mother
1	Did not go to school	1
2	Grade 1 - 7	2
3	Eighth grade	3
4	Some high school but didn't graduate	4
5	Graduated from high school	5
6	Went to vocational school after graduating from high school	6
7	Some college but didn't graduate	7
8	College graduate (4 years)	8
9	Don't know	9

Occupational status of the breadwinner

What is the major job held by the main breadwinner of your home? (Write your answer in the following box. Give a specific job, not the company or place worked for.)

ANSWER: [ ]

Number of siblings

How many living brothers and sisters do you have? (Circle one number.)

0 1 2 3 4 5 6 7 8 or more